

SPECIFICATION AMENDMENTS

Applicant requests addition and replacement of the following paragraphs, respectively. Please insert paragraph [0000] before the sub title “**Background of the Invention**” and after Title on page 1. Also, please replace current paragraph [0030] with replacement paragraph [0030] below:

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[0000] This application claims priority from U.S. Provisional Applications Serial Nos. 60/202,906 and 60/214,538 filed May 10, 2000 and June 27, 2000, respectively, and is a CIP of U.S. Applications 09/345,813 and 09/802,037, filed July 2, 1999 and March 7, 2001, respectively.

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[0030] The embodiment of Figure 3 is intended for an enzyme reaction process, and the axis of rotation of the rotor 42 is no longer coincident with the corresponding longitudinal axis of the stator 30, so that the radial processing chamber gap 44 differs in dimension circumferentially around the rotor. Energy is radiated into the chamber 44 to aid the enzyme reaction process. A heat exchange structure is provided having an outer casing 32 and heat exchange material 34 35, since such processes usually are exothermic and surplus heat must be removed for optimum operative conditions for the microorganisms. A series of oxygen feed inlets 14 are arranged along the length of the stator and the oxygen fed therein is promptly emulsified into the broth, providing uniformly dispersed, micron-fine bubbles instead of being sparged therein with mm size bubbles of non-uniform distribution, as with conventional enzyme reaction systems. The carbon dioxide that is produced is vented from the upper part of the processing passage through a vent 56. The reactor according to Figure 3 is designed to operate continuously and provides a continuous and uniform CO₂ removal along the upper portion of the rotor which is constantly wetted with a film of broth of uniform mixedness of all ingredients. Also shown is the port 58 and window 60 as described with reference to Figure 2. The port and window are used to supply microwave or light radiation to facilitate the enzyme reaction process.